IN THE CLAIMS:

1. (CURRENTLY AMENDED) A magnetic recording medium comprising:

a non-magnetic substrate;

a non-magnetic metal ground layer formed on a main surface side of the non-magnetic substrate and containing an Ru concentration of at least 20 at%; and

a magnetic layer formed on the non-magnetic metal ground layer and having a metal magnetic thin film~~,~~

wherein the non-magnetic metal ground layer is constructed by sequentially stacking a plurality of layers, wherein each stacked layer has an Ru concentration of at least 20 at%, and includes other compositions containing Ru and an element other than Ru.

2. (CANCELED).

3. (PREVIOUSLY AMENDED) The medium according to claim 1, wherein the non-magnetic metal ground layer has a graded composition such that a composition of the non-magnetic metal ground layer continuously changes.

4. (CURRENTLY AMENDED) The medium according to claim 1, wherein the non-magnetic metal ground layer is made of alloy of Ru and at least one kind of material selected from a group consisting of Cr, Ti, Ta, Zr, Hf, Fe, Co, Mn, Si, Al, Ag, Au, and Ir, and a composite ratio of the Ru concentration in the alloy is set to at least 50 at%.

5. (CURRENTLY AMENDED) The medium according to claim 1, wherein the non-magnetic metal ground layer is made of an Ru alloy and at least one kind of material selected from a group consisting W, Mo, V, Nb, and B, and a composite ratio of the Ru concentration in the alloy is set to at least 20 at%.

6. (CURRENTLY AMENDED) The medium according to claim 1, wherein the non-magnetic metal ground layer is made of alloy of Ru and at least one kind of material selected from a group consisting of Cu, Ni, Pd, Pt, Y, and C, and a composite ratio of the Ru concentration in the alloy is set to 80 at% or more.

7. (PREVIOUSLY AMENDED) The medium according to claim 1, wherein the non magnetic metal ground layer contains a concentration of at least one of oxygen and nitrogen.

8. (CURRENTLY AMENDED) The medium according to claim 7, wherein the concentration of at least one of oxygen and nitrogen is contained at a composite ratio of 0.2 to 10 at% in the non-magnetic metal ground layer.

9. (PREVIOUSLY AMENDED) The medium according to claim 1, wherein the non-magnetic metal ground layer is constructed by adding at least one kind of material selected from a group consisting of oxide, nitride, carbide, and carbon and formed in a granular structure.

10. (PREVIOUSLY AMENDED) The medium according to claim 9, wherein the oxide includes at least one kind of material selected from a group consisting of SiO2, Al2O3, TiO2, Ta2O3, ZrO, Y2O3, and MgO, the nitride is at least one kind of material selected from a group consisting of TiN, BN, AlN, Si3N4, and TaN, and the carbide is at least one kind of material selected from a group consisting of SiC, TiC, B4C, and TaC.

11. (PREVIOUSLY AMENDED) The medium according to claim 1, wherein the magnetic layer is constructed by layering a plurality of metal magnetic thin films, with at least one intermediate layer inserted there between, the intermediate layer being made of at least one kind of material selected from a group consisting of Pt, Pd, and Ni.

12. (CURRENTLY AMENDED) The medium according to claim 1, wherein the magnetic layer contains at least one kind of material selected from a group consisting of Cr, Mo, W, V, Nb, Zr, Hf, Ta, Ru, Rh, Ir, Ti, B, P, and C at a concentration from 0.5 to 25 at%.

13. (CURRENTLY AMENDED) The medium according to claim 1, wherein the magnetic layer contains a concentration at least one of oxygen and nitrogen at 0.2 to 15 at%.

14. (PREVIOUSLY AMENDED) The medium according to claim 1, wherein the magnetic layer is constructed by at least one kind of material selected from a group consisting of oxide, nitride, and carbide, formed in a granular structure.

15. (PREVIOUSLY AMENDED) The medium according to claim 1, wherein the magnetic layer is constructed by layering a plurality of metal magnetic thin films, with at least one separation layer inserted there between, the separation layer being made of Ru singly or alloy of Ru and at least one kind of material selected from a group consisting of Al, Ti, V, Cr, Fe, Mn, Co, Ni, Cu, Y, Zr, Nb, Mo, Rh, Pd, Ag, Hf, Ta, W, Ir, Pt, Au, Si, B, and C.

16. (CURRENTLY AMENDED) The medium according to claim 15, wherein the separation layer includes Ru singly or an Ru alloy~~, and further includes one of an oxide, a nitride, a carbide, or an oxide, nitride, or carbide mixture~~ and at least one kind of material selected from a first group consisting of Cr, Mo, W, Ti, Ta, Nb, Ni, Cu, Al, V, Zr, Hf, C, B, and Si, and a second group consisting of ~~oxide~~oxides, ~~nitride~~nitrides, and ~~carbide~~carbides, the ~~oxide~~oxides including SiO2, Al2O3, TiO2, Ta2O3, ZrO, Y2O3, and MgO, the ~~nitride~~nitrides including TiN, BN, AlN, Si3N4, and TaN, and the ~~carbide~~carbides including SiC, TiC, B4C, and TaC~~, the separation layer is mixed with at least one kind of material selected from the second group, or the separation layer is mixed with at least one kind of material selected from the first and second groups~~.

17. (WITHDRAWN) a method of manufacturing a magnetic recording medium, comprising:

a step of forming a non-magnetic metal ground layer containing ru at 20 at% or more, on one main surface side of the non-magnetic substrate, under a condition of 100°C or less; and

a step of forming thereafter a magnetic layer having a metal magnetic thin film, on the non-magnetic metal ground layer, under a condition of 100°C or less.

18. (WITHDRAWN) The method according to claim 17, wherein the non-magnetic metal ground layer and the magnetic layer are formed by a sputtering method.